The Caribbean Regional Association for Ocean Observing (CaRA)

Executive Director Update

Julio M. Morell
Background

CaRA achievements
Initial CaRA development project (2004-2007)

“Proposal to the Coastal Services Center to Establish CaRA, the Caribbean Regional Association in Support of an Integrated Ocean and Coastal Observing System for the U.S. Caribbean Exclusive Economic Zone”

• Establishment of CaRA offices (UPRM and UVI)
• Identification of existing coastal marine data streams
• CaRA and CarICOOS web pages
• Regional needs assessment
  • Canvassing PR Sea Grant and CIEL
  • Sector focused workshops, presentations, meetings
• Pilot projects implemented (NWS, NERRS)
• Expert visitors program
• Regional Association and Council established in Dec 07 (representative constituency and governing body)
CaRA Structure

• Organizational structure
  – Memorandum Of Agreement
    (signed on Dec 4, 2007)
  Membership:
  – 57 signatories

• Affiliations
  – Academics 18%
  – Government agencies 12%
  – Private Sector 40%
  – Federal Agencies 9%
  – Self Signatories 21%

Stakeholders Council

• 13 Council Members
  – 1 Council Chairman
  – 1 Council Secretary
  – Executive Committee (4 council members)
  – Membership and Nominations Committee
  – 4 additional committees to be empanelled:
    » Education & outreach
    » DMAC
    » Observing systems
    » Products and Services
Current activities

CaRA development project (2008-2010):

“SUPPORT TO THE CARIBBEAN REGIONAL ASSOCIATION FOR INTEGRATED COASTAL OCEAN OBSERVING”

- Enhancing proactive participation and diversity within the Governance Structure
- Continued revision and refinement of CaRA’s draft development plan by the Stakeholder Council and Executive Committee, consultants and legal counsel.
- Continued and expanded exchange with stakeholders to provide for further development of CaRA’s initial needs assessment
- Continued refinement and prioritization of CaRA’s observing system design.
- Development and reformatting of CaRA’s website to conform to a common identity with other IOOS components
- Enhancement of stakeholder recognition and trust through development of useful data products
Current activities (continued)

CaRA development project (2008-2010):

• Re-engaged and recruited CaRA interns and IT technician
• Support and participation in “Caribbean Training Course for Operators of Sea Level Stations (IOC-GLOSS-PRSN)”
• Participation in IOOS related meetings and workshops
• Publication of articles and interviews
• Hosted expert partner visits (WeatherFlow, CoastWatch)
• CSO-CaRA Workshop at San Juan, Puerto Rico. Workshop on Ocean Observing in Support of Coastal Management
• Participation in the USCG Harbor Safety and Security Committee meetings
• Funded VI WeatherFlow initiative and supplemented VI ROMS effort
• Leveraging funding:
  • DHS ($50k/y 5y)
  • DRNA ($145k)
  • UPRM ($10k)
CarICOOS development project (2008-2010)

“Implementation of the Caribbean Regional Integrated Coastal Ocean Observing System” (NOAA IOOS sponsored)

Project Goals:

• Emplace and maintain coastal observing assets to provide near real time “in situ” observations of coastal circulation, waves, winds and water quality in Atlantic and Caribbean coastal zonal bands.

• Implement an operational modeling program that will generate coastal wind, wave and circulation forecasts while providing an integrative regional context to observational data from core coastal observing assets. The proposed modeling program will also generate improved storm surge driven coastal inundation maps.

• Develop observational capacity and tools to monitor water quality in the region.

• Assure data usefulness to all stakeholder sectors by following tailored product design and delivery strategies and implementing DMAC/procedures.
CarICOOS development project (2008-2010)

Major Elements:

• Deploy operate and maintain 2 custom designed GOMOOS type data buoys in Atlantic and Caribbean coastal zonal bands in collaboration with U. Maine

• Install 5 hurricane hardened coastal weather stations and upgrade 7 existing weather stations in collaboration with WeatherFlow Inc.

• Implement SWAN (Simulating Waves Nearshore) model in three nested computational grids: coarse (1.25 by 1.0 degree), intermediate (ca. 1.8 km) and fine (35-50 m resolution) for selected nearshore areas

• Implement ADCIRC Coastal Circulation and Storm Surge Model for the region

• Develop remotely sensed data products and applications in collaboration with NOAA CoastWatch
Significant Accomplishments

CaRA-CarICOOS organizational structure established

- CaRA Stakeholder Council
  - J. Corredor, UPRM
- Project Management
  - J.M. Morell, UPRM
- Project Administration
  - R&D Center of UPRM
- CaRA VI
  - R. Watlington, UVI
- Admin. Assistance
  - J. Rodriguez
- Modeling
  - J. Capella, CaRA
  - A. Mercado, UPRM
- Remote Sensing Products
  - J. Trinanes, CoastWatch
  - J. Morell, UPRM
- In Situ Observing
  - J. Corredor, UPRM
- Data integration and Products
  - M. Canals, UH
- Outreach
  - PR Sea Grant/CI EL
  - J. Gonzalez, C. Anselmi, E Rodriguez
  - A. Amador
  - CaRA Interns
- ADCI RC, currents
  - Dave Hill Penn State U.
- Regional
  - ROMS/HYCOM
  - N. Idrisi, UVI
  - L. Cherubin U. Miami
- SWAN, waves
  - Juan C. Ortiz
  - UniNorte
- ADCI RC, inundation
  - Brian Blanton Renaissance I.
- Coastal buoys
  - N. Pettigrew
  - U. Of Maine
- Coastal Mesonet
  - Jay Titlow WeatherFlow
- IT/DMAC
  - Damian Ruiz CaRA
- Graphic Design Consultant
  - C. Sueiras CaRA Intern

Remo Teixeira, S. Strippling, NWS

Additional:
- A. Amador
- I. G. Ortiz
Significant Accomplishments

- All contracts with partner institutions are in place and most equipment acquisitions have been completed

- Personnel working on the project, particularly in the numerical modeling component, are fully engaged and currently undergoing hands-on training with partner experts

- Formal contract established with PR DNRE for application of ADCIRC model in delineation of storm surge coastline limits parallel application.

- Sub-award from Stevens Institute of Technology for DHS-funded Center for Secure and Resilient Ports (CSR)

- Collaboration under way with Rutgers COOL for proof-of-concept deployment of “dual-use” CODAR HF radar

- New CarICOOS data portal  http:\:\caricoos.org\drupal
Significant Accomplishments

Partnering with outside the region experts has been extremely effective for technology transfer and training of CaRA interns.

**EXPERTS**
- J. Trinanes
  NOAA CoastWatch
- J.C. Ortiz
  UniNorte, Colombia
- B. Blanton
  Renaissance Institute
- D. Hill
  Penn State
- N. Pettigrew
  U Maine

**INTERNS**
- J. Gonzalez
- C. Anselmi
- E. Rodriguez
- A Amador
- C. Sueiras

IT
- Damian Ruiz
Questions ?